USGS

WATER RESOURCES RESEARCH GRANT PROPOSAL

Project ID: 2003TX86B

Title: Determining a Method for Targeting Brush Control Through Remote Sensing, GIS, and Hydrologic Modeling

Project Type: Research

Focus Categories: Hydrology, Models, Surface Water

Keywords: brush control, remote sensing, SWAT, GIS

Start Date: 03/01/2003

End Date: 02/28/2004

Federal Funds Requested: $EditRegion10

Matching Funds: $EditRegion11

Congressional District: 5

Principal Investigators: Afinowicz, Jason D.; Munster, Clyde L. (Texas A&M University)

Abstract: Much of Texas has suffered from the widespread invasion of mesquite and other brush species. These nuisance brush species consume or waste a significant amount of water. Several efforts suggest that removing or clearing brush could free up substantial amounts of water that could then flow to streams and groundwater supplies. The aim of this project is to develop a comprehensive science-based method to determine regions where the greatest increase in water yield is likely to result from implementation of brush control practices. This project will create and validate a methodology to recognize different levels of brush cover from remotely sensed data, will help select candidate sites for brush control based on soils, slope, and climate, and will use the Soil Water Assessment Tool to determine how much water can be saved from clearing brush at specific sites.

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